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XYLOTRECHUS SMEI (CASTELNAU & GORY, 1841):
ITS PRESENCE IN WESTERN PALAEARCTIC REGION
AND DESCRIPTION OF THE PUPA

(COLEOPTERA, CERAMBYCIDAE)

Since 1990 a new imported longicorn, contemporarily identified by RATTI (1990) and DIOLI & VIGANÒ (1990) as *Xylotrechus stebbingi* Gahan, 1906, has been recorded in Italy (Venetia and Lombardy).

The oldest Italian specimen was collected already in Piedmont in 1982 (SAMA & COCQUEMPOT 1995) and after such records the species was collected in Friuli-Venezia Giulia, Liguria, Emilia-Romagna, Tuscany, Marche, Latium, Abruzzo and Sardinia (GOBBI 1993; SAMA & COCQUEMPOT 1995; BRUGNOLA 1996; VITALI 1999; SAMA 1999; ULIANA 2001). In Western Palaearctic region it was found also in France, Switzerland, Germany, continental Greece, Crete, Israel and Tunisia (SAMA & COCQUEMPOT 1995; HOLZSCHUH 1995; PAVLÍCEK *et alii* 1998; SAMA 1999; KÖHLER 2000; BRAUD *et alii* 2002; SAMA 2002; TEUNISSEN 2002).

Nevertheless, the GAHAN's (1906) description of *Xylotrechus stebbingi* and of *X. smei* (Castelnau & Gory, 1841), besides the illustrations

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provided by STEBBING (1914) for both species, proves the mistake of the Western Palaearctic identifications, as SAMA & COCQUEMPOT (1995) already suspected.

According to the original description, *X. stebbingi* is characterised by: "Elytra ... narrowly covered with grey pubescence at the base, marked with some small spots ... which form three interrupted bands; ... the apex also narrowly bordered with ashy-grey; ... disc [of the pronotum] with a median asperate carina".

On the contrary, according to GAHAN (1906), *X. smei* is characterised by: "greyish or yellow pubescence that ... forms bands and spots on the elytra, disposed as follows: a transverse band on each at the base, ... a short transverse spot; a narrow band which begins nears the scutellum, passes close by the suture, diverges... and curves outwards; ... an apical band, which is slightly produced forwards at the suture ... Prothorax ... raised along middle of disc; ... the disc more or less infusate in the middle, especially towards the base ... This species varies considerably in colour and to some extent also in the markings".

Apart from such differences, both species are very much alike.

The description of *X. smei* is that one that corresponds to the species found in Italy. The specimens with complete pubescence are characterised by elytral pattern like *Clytus*-species and not by three transversal bands. Moreover such pattern forms distinct bands of pubescence at anterior and hind margin of elytra and not narrow borders; the posterior one is slightly produced forwards at the suture (in the STEBBING's illustration of *X. stebbingi* it is not even present). At last the disc of the pronotum is simply raised along middle, without any asperate carina.

Also the distribution (DUFFY 1968) of *X. stebbingi* (Tibet, Himalayas) and of *X. smei* (Pakistan, India, Bhutan, Myanmar, introduced from time in Tanzania) suggests as more realistic scenario the importation of this latter species, through traded timbers, from countries with harbours and more open to foreign commerce.

In fact, the larval development of *X. stebbingi* (STEBBING 1914; DUFFY 1968) is related only to *Quercus dilatata* Lindley, a tree species widespread at 2100-2700 m, and *Quercus lanata* Sm. in Rees (= *incana* Roxburgh, *nomen nudum*), widespread at 1300-3000 m (GAMBLE 1972). On the contrary, *X. smei* is a polyphagous species, already recorded (STEBBING 1914; DUFFY 1968) from a lot of tropical

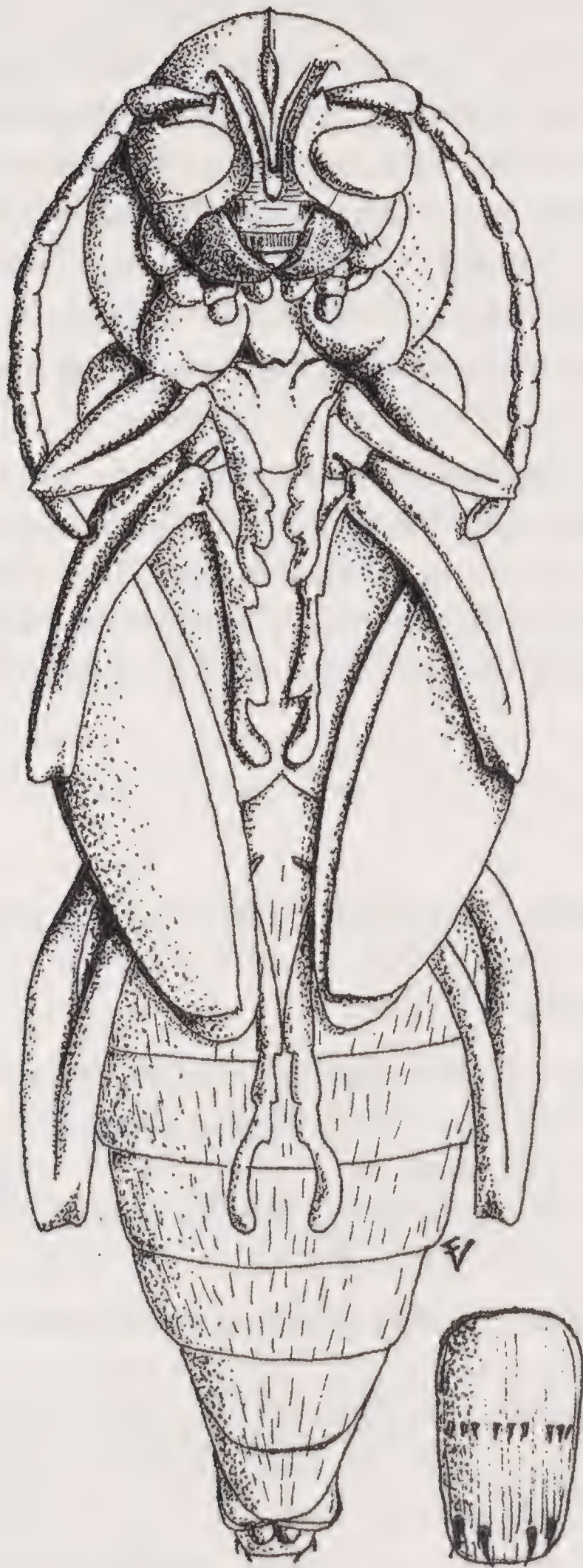


Fig. 1 - Pupa of *Xylotrechus smei* (Castelnau & Gory, 1841), from Genoa, in ventral view, with particular of the 7th sternite.

and Palaearctic broadleaf trees, among which genera signalised also in Italy, such as *Quercus*, *Morus* and *Ficus*.

Moreover I had the occasion to compare two specimens from Burma (Shwegoo Myo, X.1885, L. Fea leg.; Tenasserim, Meetan, IV.1887, L. Fea leg., both preserved in the Museo civico di Storia naturale "G. Doria", Genoa), identified by Gahan himself as *X. vicinus* (Castelnau & Gory, 1841), a junior synonymous of *X. smei*, with twenty-four specimens from the series collected in Lombardy by DIOLI & VIGANÒ (ex coll. V. Rosa, now in my collection): I can state that the specimens belong to the same species.

It is therefore likely that all European and Mediterranean records of *X. stebbingi* must be referred to *X. smei*.

Nevertheless its relative old description, pre-imago stages of *X. smei* are still unknown. The finding of a pupa referable to such species gives to me the possibility to fill this gap. The description is based on a female specimen, collected in the town of Genoa (Italy, Liguria) on 3rd July 2001 under the bark of a fig log and preserved in my collection.

Xylotrechus smei (Castelnau & Gory, 1841), pupa

Length: 17 mm.

Head rounded; cheeks short, abruptly hooked at their apex and above carinate along the cutter side, pubescent at the base; labrum longitudinally striate, with short recumbent setae; clypeus transversally striate, pubescent at sides; forehead with V-shaped carina, the tip of which reaches the level of lower margin of the eyes and the ends exceed the level of antennal supports; another feeble longitudinal carina, connected at the tip with the previous one, enlarges at the level of antennal supports, forming an oval-elongate flat tubercle and reaches the hind margin of the head. Joints of the palpi subquadrate, their end rounded. Antennae short, 10th joint reaches the front knees.

Pronotum rounded, very feebly constricted at the base, smooth, with two little clusters of 7-8 sparse short conical spinules at each side, one at the base and another a little behind the middle of lateral margin, well visible from the ventral side; mesonotum and metanotum fairly punctate.

Abdomen fairly elongate (the hind knees reach the hind margin of the 5th abdominal segment), regularly narrowed and bowed towards the tip, longitudinally finely striate; sternites without spinules, tergites 1st–6th with several acicular short spinules, 7th tergite with nine acicular spinules transversely disposed along the middle and two pair of acicular spines transversely disposed along the hind margin.

Legs smooth; front femora fusiform, middle femora bowed, hind femora bowed at the base and fusiform at the apex; tibiae bowed; middle tarsi long, their onychium reaches the hind margin of the metasternum, hind tarsi very long, their onychium reaches hardly the level of hind knees.

The CHEREPANOV's key (1988) can be modified as follows for the pupae of *Xylotrechus*-species from Western Europe:

- 1 (4) Pronotum smooth on the disc, at least covered by sparse spinules at the sides and along the front margin.
- 2 (3) Pronotum covered by sparse or large straight aristate spinules along the front margin and at the sides.
. *X. rusticus* (L., 1758)
- 3 (2) Pronotum with two clusters of conical spinules at the sides, one near the base and another in the middle.
. *X. smei* (Castelnau & Gory, 1841)
- 4 (1) Pronotum with clusters of spinules on the disc or nearly all covered by sparse spinules.
- 5 (6) Pronotum all covered by sparse aristate spinules, except the middle of the hind slope. . *X. pantherinus* (Savenius, 1825)
- 6 (5) Pronotum covered by clusters of spinules on the disc.
- 7 (8) Pronotum covered by aristate spinule uniformly distributed in anterior half and at the sides.
. *X. arvicola* (Olivier, 1795)
- 8 (7) Pronotum covered by clusters of acicular spinules, two at the base, two along each side and two transversely on the disc. *X. antilope* (Schönherr, 1817)

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ABSTRACT

The pupa of *Xylotrechus smei* (Castelnau & Gory, 1841) is described and illustrated for the first time.

The presence in West-Palaearctic region of such Oriental cerambycid, erroneously recorded by previous authors as *Xylotrechus stebbingi* Gahan, 1906, is proved; the key by CHEREPANOV (1988) for the identification of the pupae of West-European *Xylotrechus*-species is adapted.

RIASSUNTO

Xylotrechus smei (Castelnau & Gory, 1841): sua presenza nella regione paleartica occidentale e descrizione della pupa (Coleoptera Cerambycidae).

Viene fornita la descrizione della pupa di *Xylotrechus smei* (Castelnau & Gory, 1841), specie orientale importata ed acclimatatasi nella regione paleartica occidentale, sinora identificata erroneamente come *Xylotrechus stebbingi* Gahan, 1906. Viene inoltre modificata la tabella di CHEREPANOV 1988 per l'identificazione delle pupe delle specie paleartiche occidentali di *Xylotrechus*.